DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026547
Date Inspected: 20-Oct-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Jesse Cayabyab and Pat Swain

Inspected CWI report:	☐	**Yes**	☑	**No**	☐	**N/A**		
Electrode to specification:	☑	**Yes**	☐	**No**	☐	**N/A**		
Qualified Welders:	☑	**Yes**	☐	**No**	☐	**N/A**		
Approved Drawings:	☑	**Yes**	☐	**No**	☐	**N/A**		

CWI Present:	☑	**Yes**	☐	**No**				
Rod Oven in Use:	☑	**Yes**	☐	**No**	☐	**N/A**		
Weld Procedures Followed:	☑	**Yes**	☐	**No**	☐	**N/A**		
Verified Joint Fit-up:	☐	**Yes**	☐	**No**	☑	**N/A**		
Approved WPS:	☑	**Yes**	☐	**No**	☐	**N/A**		
Delayed / Cancelled:	☐	**Yes**	☑	**No**	☐	**N/A**		

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

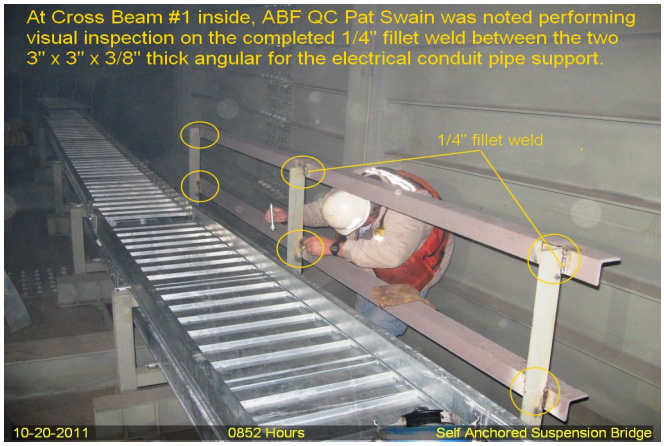
Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG location 12W/13W top deck plate A5 near the corner of edge plate 'F' outside, QA randomly observed ABF/JV qualified welder Jorge Lopez continuing to perform fill pass welding on the Seismic Performance Critical Members (SPCM) Complete Joint Penetration (CJP) splice butt joint. The welder was observed manually welding in the 1G (flat) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3040A-1. The joint being welded has a single V-groove butt joint with steel backing bar. ABF Quality Control (QC) Jesse Cayabyab was noted monitoring the welding parameters of the welder. QA randomly monitored the welding parameter with readings of 250 amperes, 23.0 volts and 320mm per minute with calculated heat input of 1.07 Kjoules per mm. travel speed which appears in conformance to the contract requirements. At the end of the shift, fill pass to cover pass welding on the remaining length of the joint was completed.

After the welding completion of the 12W/13W top deck plate A5, the welder has moved inside the OBG and removed the welded temporary attachment U bars that were used during fit up of the edge plate 'F' at same OBG location. The welder also removed at the same time the backing bar of the welded edge plate 'F'. The welder was noted using carbon air arc gouging to removed the temporary attachments and backing bar. At the end of the shift, carbon air arc gouging/removal of the temporary attachments and backing bar was still continuing and should remain tomorrow.

At Cross Beam #1 inside, this QA randomly observed ABF welder Mike Jimenez perform multiple position fillet welding between 3” x 3” x 3/8” thick angular to same for electrical Cable Tray Support (CTS). The welder was noted using Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode. ABF QC Pat Swain was observed monitoring the welder with 125 Amps measured current during welding. This QA called the attention of the QC when the fillet weld he was welding was wrapped around the corner of opposite sides of a common plane. This was unacceptable practice per Section 2.8.3.5 of American Welding Society (AWS) D1.1 which is the reference standard for the Cable Tray Support welding. This was also brought to the attention of ABF QC Supervisor Bonifacio Daquinag and Lead QA Danny Reyes who both agreed that wrapping the corner was unacceptable.

At Cross Beam #4 inside, this QA randomly observed ABF welder Erick Sparks perform multiple position fillet welding between 3” x 3” x 3/8” thick angular to same for electrical Cable Tray Support (CTS). The welder was noted using Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode. ABF QC Pat Swain was observed monitoring the welder with 120 Amps measured current during welding. Same situation was noted on 24 fillet weld connections but changed on the other 24 fillet weld connections implementing the AWS D1.1 requirements. At the end of the shift, 48 number of ¼” fillet welding on four sides of the 3” x 3” x 3/8” thick angular to same was completed.



WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer